



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/723,767	11/26/2003	Koji Yanagihara	16UL03229	9684	
7590	12/16/2008		EXAMINER		
Patrick W. Rasche Armstrong Teasdale LLP Suite 2600 One Metropolitan Square St. Louis, MO 63102		MEHTA, PARIKHA SOLANKI			
		ART UNIT	PAPER NUMBER	3737	
		MAIL DATE	DELIVERY MODE	12/16/2008 PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/723,767	YANAGIHARA ET AL.	
	Examiner	Art Unit	
	PARIKHA S. MEHTA	3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 14 October 2008.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1,3-12 and 14-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1,3-12 and 14-20 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. _____.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11.13.08.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) Notice of Informal Patent Application

6) Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 13 November 2008 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of the Japanese Yajima patent publication (Japanese document number 6113944).

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. Specifically, the title should be at least generally indicative of the inventive feature(s) of the claimed apparatus.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 3, 8-10, 12, 14 and 19 are rejected under 35 U.S.C. 102(b) as being unpatentable over King (US Patent No. 5,127,410), hereinafter King ('410), previously made of record.

Regarding claims 1, 3, 8-10, 12, 14 and 19, King ('410) teaches an ultrasonic probe comprising a first partial enclosure formed of hard plastics having an opening and a second partial enclosure integrally formed with the first enclosure so as to cover the opening at the tip, wherein the second partial enclosure is formed of a flexible (soft) plastic film in contact with the transmission/reception surface of the ultrasonic transducer, and the ultrasonic transceiver unit extends through the opening (Abstract, col. 2 lines 39-49, col. 4 lines 5-7). King ('410) states that the film is bonded to a "film backing lens," (Abstract) which constitutes the acoustic lens as claimed. The flexible plastic Mylar film of King ('410) constitutes the thermoplastic polymer claimed in the instant application. Regarding the limitation "the acoustic lens [is] positioned between and in direct contact with...the transceiver unit", since claim 1 recites that the transceiver unit comprises the acoustic lens, this limitation recites nothing more than that the lens is in contact with itself. Accordingly, the reference lens meets this limitation.

King ('410) does not expressly teach that the lens is in direct contact with the second enclosure/flexible plastic film. Applicant has not disclosed that arranging the lens to be in direct contact with the second enclosure solves a particular problem or presents a specific advantage over the prior art. It has previously been held that the elimination of a prior art element, where its function is not desired, is obvious and unpatentable (*Ex parte Wu*, 10 USPQ 2031 (Bd. Pat. App. & Inter. 1989); *In re Larson*, 340 F.2d 965, 144 USPQ 347 (CCPA 1965); *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975)). Furthermore, one of ordinary skill in the art would expect Applicant's invention to work equally well with or without a grease layer between the lens and the second enclosure, as King ('410) teaches that the grease layer is acoustically conductive and therefore would not attenuate the transmitted wave (col. 4 lines 4-15). Accordingly, it would have been obvious to one of ordinary skill in the art at the time of invention to have modified the transducer of King ('410) to eliminate the grease layer 31 between the lens and the film in order to achieve the claimed invention.

6. Claims 4-7, 11, 15-18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over King ('410) as applied to claims 1 and 12 above, further in view of Silber (US Patent No. 5,928,154), hereinafter Silber ('154), previously made of record.

Regarding claims 4-7 and 15-18, King ('410) substantially teaches all features of the present invention as previously discussed for claim 1. King ('410) is silent with respect to specific types of hard plastic which may be used for the first enclosure. In the same field of endeavor, Silber ('154) teaches an ultrasonic probe having a first enclosure made of thermoplastic material, polyethylene, polybutylene, or

any other material blend providing properties of both elastomers and plastics (col. 7 lines 51-56, col. 8 lines 40-46). Silber ('154) teaches these materials for enhancing the ergonomic quality of the probe while allowing the sonographer to maintain sufficient control of the probe (col. 3 lines 16-23, col. 3 line 65-col. 4 line 2). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the first enclosure of King ('410) to be made of any of the materials of Silber ('154), in light of the motivation provided by Silber ('154).

Regarding claims 11 and 20, Silber ('154) further teaches that the housing of the probe may be color-coded to facilitate identification of the type or model of the probe, which also includes different center frequencies as claimed in the instant application (col. 9 lines 12-14). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the probe of King ('410) to also comprise a color-coding indicative of the center frequency of the probe to permit the sonographer to identify the probe type, in view of the teachings of Silber ('154).

Response to Arguments

7. Applicant's arguments filed 14 October 2008 have been fully considered but they are not persuasive.

Applicant argues that, because King ('410) includes a grease layer between the acoustic lens and the film for the purpose of facilitating lubrication during movement of the lens, the reference teaches away from the claimed limitation of the lens being in direct contact with the film (Remarks p. 8). Examiner respectfully directs Applicant's attention to the basis of rejection presented in the prior Office Action, wherein it is stated that "it has previously been held that the elimination of a prior art element, where its function is not desired, is obvious and unpatentable (*Ex parte Wu* , 10 USPQ 2031 (Bd. Pat. App. & Inter. 1989); *In re Larson*, 340 F.2d 965, 144 USPQ 347 (CCPA 1965); *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975)" (emphasis added). Accordingly, a skilled artisan would readily recognize that, if the acoustic lens does not need to be rotated, the grease layer of King ('410) would serve no purpose and as such could readily be eliminated from the structure. As such, the limitation is in fact found to be obvious and unpatentable over the prior art. Furthermore, while it is conceded that the passage of King ('410) as cited by Applicant does present motivation to include the grease layer, it does not in fact teach away from excluding it as purported by Applicant.

As Applicant's arguments are wholly unpersuasive for at least the foregoing reasons, the previous rejection of all pending claims as unpatentable over the prior art is maintained and reiterated herein.

8. Applicant's amendment to the specification is not sufficient to correct the deficiencies of the title. Accordingly, the previous objection to the specification is maintained and reiterated herein.

9. Applicant's amendments to claims 1, 3-12 and 14-20 are sufficient to overcome the previous objections to those claims for various minor informalities. Accordingly, those objections are hereby vacated.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PARIKHA S. MEHTA whose telephone number is (571)272-3248. The examiner can normally be reached on M-F, 8 - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571.272.4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ruth S. Smith/
Primary Examiner, Art Unit 3737

/Parikha S Mehta/
Examiner, Art Unit 3737